

Amendments to the Claims

Please cancel claims 37-56 without prejudice. Please add new claims 57-76 as shown below in the Listing of Claims.

Listing of Claims

1-56. (Cancelled)

57. (New) A process for producing an alcohol comprising:

- a) enzymatically reducing a carbonyl compound in a reaction mixture comprising:
 - i) said carbonyl compound;
 - ii) a first dehydrogenase enzyme, wherein first dehydrogenase enzyme reduces said carbonyl compound to form said alcohol;
 - iii) a second dehydrogenase enzyme wherein said second dehydrogenase enzyme oxidizes a second substrate;
 - iv) said second substrate;
 - v) NADH or NADPH which serves as a cofactor for both said first dehydrogenase enzyme and said second dehydrogenase enzyme;
 - vi) an aqueous solvent system that does not include added surfactant or organic solvent and which is in the form of an emulsion or suspension due to the concentration of said carbonyl compound being higher than or equal to its solubility limit in said aqueous solvent system;
- b) recovering said alcohol.

58. (New) The process of claim 57, wherein said carbonyl compound is either an aldehyde or an unsymmetric ketone and is at an initial concentration of at least 50 mM.

59. (New) The process of claim 58, wherein the initial concentration of said carbonyl compound is between 100 and 1,000 mM.

60. (New) The process of claim 59, wherein said process is carried out at a temperature of between 10 and 80°C.
61. (New) The process of claim 60, wherein said alcohol is recovered by adding an organic solvent to said aqueous solvent system and then isolating said alcohol from the organic phase thereby produced.
62. (New) The process of claim 58, wherein said carbonyl compound is a phenyl ketone optionally substituted with one or more halogens or a phenyl aldehyde optionally substituted with one or more halogens.
63. (New) The process of claim 62, wherein the initial concentration of said carbonyl compound is between 100 and 1,000 mM and said process is carried out at a temperature of between 10 and 80°C.
64. (New) The process of claim 63, wherein said alcohol is recovered by adding an organic solvent to said aqueous solvent system and then isolating said alcohol from the organic phase thereby produced.
65. (New) The process of claim 58, wherein said carbonyl compound is an acetophenone optionally substituted with one or more halogens.
66. (New) The process of claim 65, wherein said carbonyl compound is selected from the group consisting of: 2-chloroacetophenone; 4-chloroacetophenone; and 2,3'-dichloroacetophenone.
67. (New) The process of claim 58, wherein said carbonyl compound is cinnamaldehyde optionally substituted with one or more halogens.
68. (New) The process of claim 60, wherein said carbonyl compound is either an acetophenone optionally substituted with one or more halogens or cinnamaldehyde optionally substituted with one or more halogens.

69. (New) A process for producing a carbonyl compound comprising:
- a) enzymatically oxidizing an alcohol in a reaction mixture comprising:
 - i) said alcohol;
 - ii) a first dehydrogenase enzyme, wherein first dehydrogenase enzyme oxidizes said alcohol to form said carbonyl compound;
 - iii) a second dehydrogenase enzyme wherein said second dehydrogenase enzyme reduces a second substrate;
 - iv) said second substrate;
 - v) NADH or NADPH which serves as a cofactor for both said first dehydrogenase enzyme and said second dehydrogenase enzyme;
 - vi) an aqueous solvent system that does not include added surfactant or organic solvent, and wherein said aqueous solvent system is in the form of an emulsion or suspension;
 - b) recovering said carbonyl compound.
70. (New) The process of claim 69, wherein said carbonyl compound is either an aldehyde or an unsymmetric ketone.
71. (New) The process of claim 70, wherein said process is carried out at a temperature of between 10 and 80°C.
72. (New) The process of claim 70, wherein said process is carried out at a temperature of between 20 and 40°C.
73. (New) The process of claim 69, wherein said carbonyl compound is a phenyl ketone optionally substituted with one or more halogens or a phenyl aldehyde optionally substituted with one or more halogens.
74. (New) The process of claim 69, wherein said carbonyl compound is an acetophenone optionally substituted with one or more halogens.

75. (New) The process of claim 74, wherein said acetophenone is selected from the group consisting of: 2-chloroacetophenone; 4-chloroacetophenone; and 2,3'-dichloroacetophenone.
76. (New) The process of claim 69, wherein process produces cinnamaldehyde optionally substituted with one or more halogens.